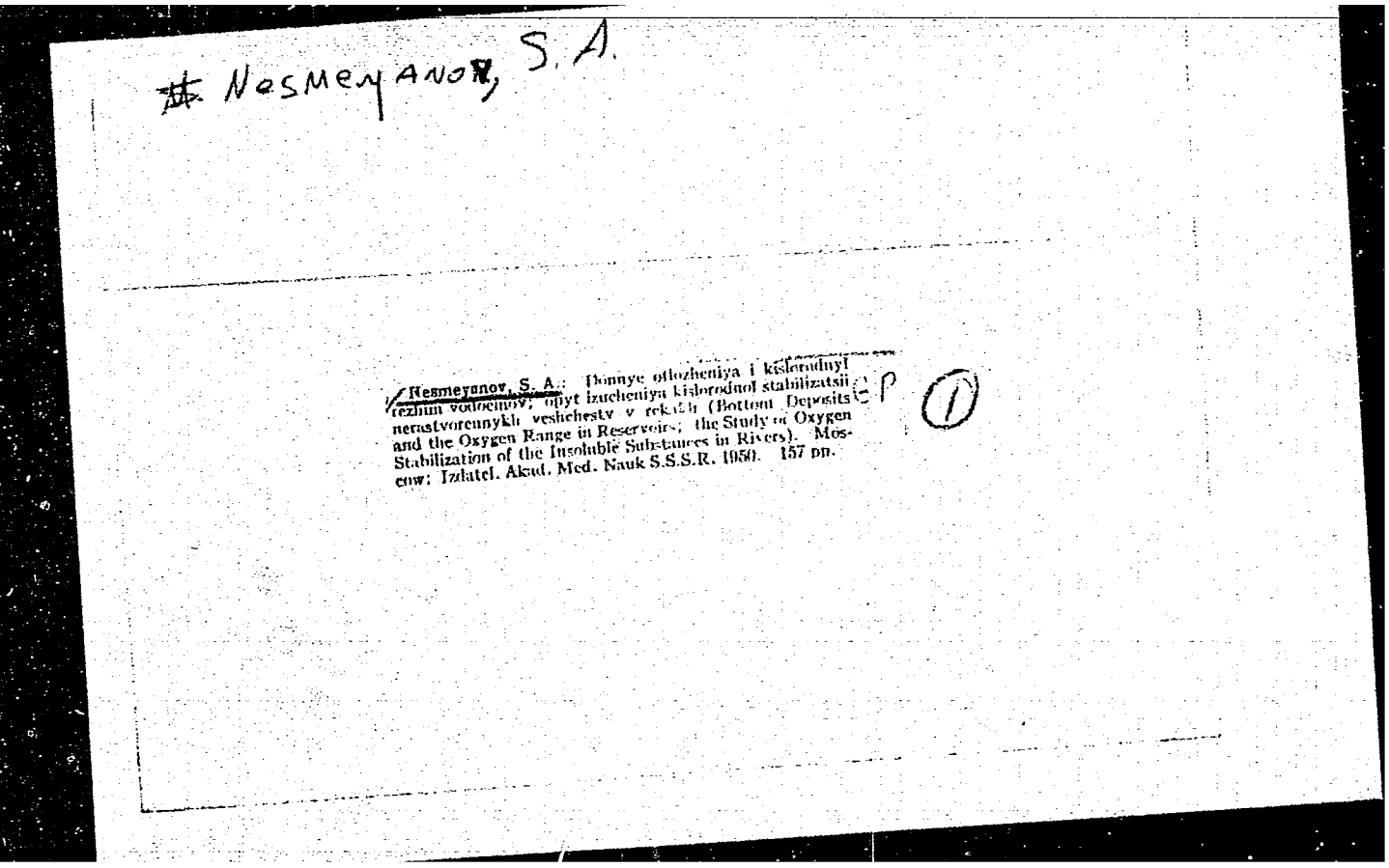
NESMEYANOV, S. A.

"Third Interdepartmental Conference of the Industrial Ministries on the Purification of Waste Waters," Gig. i San., No. 8, 1949.



Nesmeyanov, S. A.

Nesmeyanov, S. A.: Donnye otlozheniya i kislorodnyy rezhim vodoyemov; opyt izucheniya kislorodnoi stabilizatsii nerastvorennykh veshchestv v rekakh (Bottom Deposits and the Oxygen Range in Reservoirs; the Study of Oxygen Stabilization of the Insoluble Substances in Rivers). Moscow: Izdatel. Akad. Med. Nauk S.S.S.R. 1950. 157 pp.

NESMEYANOV, S. A.

"Benthic Sediments and the Oxygen Regimen of Reservoirs." Sub 23 Mar 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

NESMEYANOV, S.A.

All-Union planning and thematic conference at the Institute of General and Communal Hygiene of the Academy of Medicine of USSR. Gig. sanit., Moskva no.6:50-52 June 1952. (CLML 23:2)

NESMEYANOV, S.A.

Division of Permian sediments in the Tengiz Depression. Izv. vys. ucheb. zav.; geol. i razv. 2 no.6:13-26 Je '59 (MIRA 13:3)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Tengiz Depression--Geology, Stratigraphic)

NESMEYANOV, S.A.

Tectonic pattern of the Uspenskiy mine (central Kazakhstan).
Izv. vys. ucheb. zav.; geol. i razv. 3 no.7:23-30 Jl '60.
(MIRA 13:9)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Kazakhstan--Geology, Structural)

NESMEYANOV, S.A.

Permian sediments on the western slope of the Kokchetav Upland (central Kazakhstan). Vest. Mosk. un. Ser. 4: Geol. 15 no. 3: 32-36 My-Je '60. (MIRA 13:8)

1. Kafedra istoricheskoy i regiona'noy geologii.
(Kokchetav Upland--Geology, Stratigraphic)

YEMEL'YANENKO, P.F.; NESMEYANOV, S.A.

Cenotypal igneous formations in the middle Ishim Valley.
Sov.geol. 5 no.6:121-126 Je '62. (MIRA 15:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Ishim Valley--Rocks, Igneous)

LITVINSKIY, B.A. (Moskva); NESMEYANOV, S.A. (Moskva)

At the ancient banks of the Syr-Darya. Priroda 51 no.10:115-116 O '62. (MIRA 15:10)

(Syr-Darya Valley—Paleogeography)

NESMEYANOV, S.A.

Stratigraphic scheme of Quaternary sediments in the western Tien Shan in connection with the existing concepts on the development of erosion cycles. Biul. Kom. chetv. per. no.30: 136-144 '65. (MIRA 19:2)

KLEYN, A.L.; DANILOV, A.M.; Prinimali uchastiye: KOLYASNIKOV, M.P.; MISBAKHOV, A.K.; ANTROPOVA, N.G.; NESMEYANOV, Ye.V.; KHARITONOV, Yu.A.; TIMONINA, V.M.; LOPTEV, A.A.; TSIKAREV, V.G.

Accelerating the assimilation of lime during slag formation in basic open-hearth furnaces. Stal' 24 no.1:32-34 Ja '64. (MIRA 17:2)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov i Zlatoustovskiy metallurgicheskiy zavod (for Kleyn, Danilov).

IVANOVA-PAROYSKAYA, M.I.[deceased]; MESHKYANOVA, A.D.

Structural interrelationship between stock and grafr in vegetative hybridization of cotton. Trudy Inst.bot.AN Uz.SSR no.3:165-174 '55. (MLRA 10:4)

(Cotton) (Grafting)

UZENBAEV, Ye.Kh.; NESMEYANOVA, A.D.

Overcoming cross-incompatibility of cotton in distant hybridization, with the aid of vegetative contacting. Dokl.AN Uz.SSR no.8:34-37 '49.
(MLRA 6:5)

1. Institut botaniki i zoologii AN Uz.SSR (for Uzenbaev, Nesmeyanova).
2. Akademiya Nauk Uzbekskoy SSR (for Korovin). (Cotton)

NESMEYANOVA, A.D.

Comparative anatomical study of leaves in two species of Ferula.
Bot. zhur. 45 no.10:1542-1546 O '60. (MIRA 13:11)

1. Institut botaniki AN Uzbekskoy SSR, Laboratoriya ekologii.
(Ferula) (Leaves--Anatomy)

NESMEYANOVA, A.D.

Comparative ecologic and anatomic study of the leaves of Aflatunia ulmifolia and of two species of Amygdalus. Bot.zhur. 47 no.3: 398-404 Mr '62. (MIRA 15:3)

1. Institut botaniki AN UzSSR, Tashkent.
(Leaves) (Aflatunia) (Amygdalus)

AM4024183 BOOK EXPLOITATION S/0794

Nesmeyanova, G. M.; Alkhazashvili, K. M.

Investigation of the role of oxidation-reduction processes in the dissolution of uranium oxides in acid media (Issledovaniye roli okislitel'no-vosstanovitel'nykh protsessov pri rastvorenii okislov urana v kislykh sredakh) Moscow, 1960. 15 p. illus., biblio. 200 copies printed. (At head of title: Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR)

TOPIC TAGS: uranium oxide , uranium ore, uranium ore solution, uranium oxidation

PURPOSE AND COVERAGE: The results of an investigation of the oxidation and dissolution of mixed uranium oxide in acid media and the influence of divalent iron compounds on it are presented. Inasmuch as the dissolution of uranium is composed of various chemical processes and is complicated by the presence of numerous impurities contained in ores, it is necessary to study, not only the laws of uranium oxidation, but how this process is influenced by different compounds passing into solution in the case of the acidic leaching of uranium ores.

Card 1/2

AM4024183

TABLE OF CONTENTS:

SUB CODE: MM, IC SUBMITTED: 00 NR REF SOV: 005

OTHER: 004

Card 2/2

83123

S/078/60/005/009/002/017
B015/B064

21.3200

AUTHORS: Spitsyn, Vikt. I., Nesmeyanova, G. M., Kanevskiy, Ye. A.

TITLE: Some Problems of the Thermodynamics and Kinetics of the Dissolution of Uranium Oxides in Acid Medium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9, pp. 1938-1942

TEXT: The isobaric potentials of the dissolution processes were determined from publication data for UO_2, UO_3 and U_3O_8 in sulfuric acid solutions of varying concentrations considering complex formation. Besides, experiments were made on the dissolution of UO_2 and U_3O_8 in sulfuric acid solutions (150-1000 g/l) at 90°C; U^{4+} and U^{6+} were determined by the method developed by P. V. Volkov and I. P. Alimarin (Refs. 6,7). The values of the isobaric potentials of the UO_2, UO_3, and U_3O_8 dissolution processes show that especially in dilute sulfuric acid solutions, oxidizing agents should be used for dissolving UO_2 and U_3O_8. A comparison of the

Card 1/2

83123

Some Problems of the Thermodynamics and Kinetics of the Dissolution of Uranium Oxides in Acid Medium

S/078/60/005/009/002/017
B015/B064

experimental results of the U_3O_8 dissolution and the normal redox potential of the oxidizing agents shows no clear connection. The temperature effect indicates the decisive influence of kinetic factors and the mechanism of the dissolution process in the use of oxidizing agents. I. V. Tananayev and I. B. Mizetskaya are mentioned in the paper. There are 4 figures and 10 references: 7 Soviet, and 3 US.

SUBMITTED: June 25, 1959

Card 2/2

21.3000

78331
SOV/89-8-3-16/32

AUTHORS: Spitsyn, Vikt. I., Nesmeyanova, G. M., Alkhazashvili, G. M.

TITLE: Catalytic Action of Iron Compounds in the Oxidation of Uranium (IV) in Acid Media. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 3, pp 261-262 (USSR)

ABSTRACT: The oxidation reaction of uranium (IV) in presence of salts of Fe^{3+} was never investigated quantitatively. Arden (see ref) indicates that uranium oxidation is accelerated in presence of dissolved iron compound; Arthur and Wheeler (see ref) show that concentration of Fe^{3+} must be larger than 2 gm/l; Gandin and Schuhmann (see ref) propose that MnO_2 is the prime oxidizer, while the Fe^{3+} ions act as catalyzer; while Thunaes (see ref) claims that Fe^{3+} is needed to

Card 1/6

Catalytic Action of Iron Compounds in the Oxidation of Uranium (IV) in Acid Media. Letter to the Editor

78331
SOV/89-8-3-16/32

produce the necessary oxidizing potential in the medium. The authors investigated the influence of iron compounds on the oxidation of uranium, using pure mixed oxides of uranium and sulfates of Fe^{2+} and Fe^{3+}. As solvents sulfuric and nitric acids of various concentrations were used, and as oxidizer, MnO_2 and $KClO_3$. Tests were performed in an air thermostat at 20 and 90° C. Results are on Figs. 1, 2, and 3. Fe^{2+} ions exert their catalytic influence on the oxidation process of uranium in the moment of their own oxidation. The mechanism can be presented as follows:

$$Fe^{2+} \xrightarrow{\text{OXIDIZER}} Fe^{3+} \xrightarrow[U^{4+}]{} Fe^{2+} \xrightarrow{\text{OXIDIZER}} \rightarrow Fe^{3+} \xrightarrow[U^{4+}]{} Fe^{2+} \text{ etc.}$$

Card 2/6

Catalytic Action of Iron Compounds in the Oxidation of Uranium (IV) in Acid Media. Letter to the Editor

78331
SOV/89-8-3-16/32

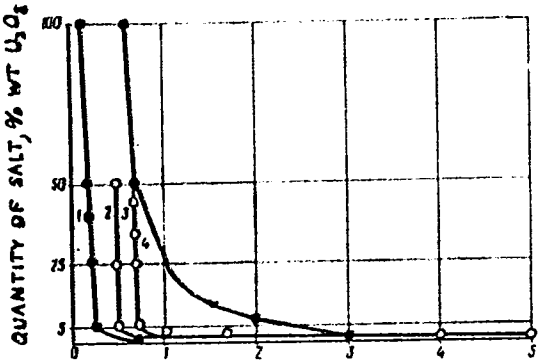


Fig. 1. Duration of dissolution of uranium versus the added Fe^{3+} salt, during a 100% dissolution of mixed uranium oxides at t = 90° C in solutions of nitric and sulfuric acids containing MnO_2. (1, 4) 50 and 5 gm/l concentrations of nitric acid, respectively; (2, 3) 5 and 150 gm/l concentrations of sulfuric acid, respectively.

Card 3/6

Catalytic Action of Iron Compounds in the Oxidation of Uranium (IV) in Acid Media. Letter to the Editor

78331
SOV/89-8-3-16/32

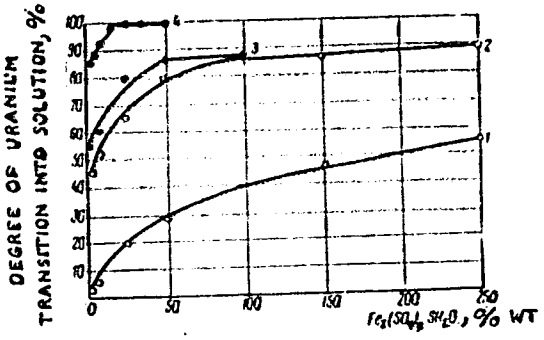


Fig. 2. Influence of Fe^{3+} salt additions on degree of uranium transition into solution of various concentrations of nitric and sulfuric acid with MnO_2. (1, 2) 5 and 50 gm/l concentrations of nitric acid, respectively; (3, 4) 5 and 50 gm/l concentrations of sulfuric acid, respectively. At t = 20° C, τ = 72 hr for the nitric acid and 48 hr for the sulfuric acid with MnO_2.

Card 4/6

Catalytic Action of Iron Compounds in the Oxidation of Uranium (IV) in Acid Media. Letter to the Editor

78331
SOV/89-8-3-16/32

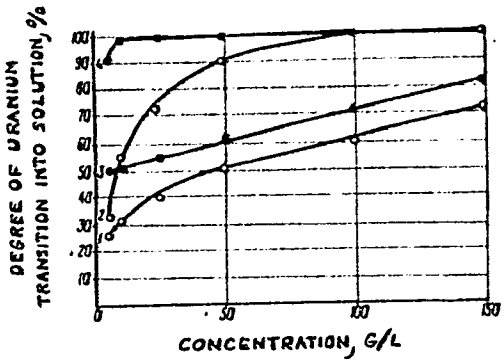


Fig. 3. Influence of microadditions of Fe^{3+} salts on degree of uranium transitions into solution during dissolving of U_3O_8 in sulfuric acid solutions of various concentrations with $KClO_3$ oxidizer (curves 1, 2) or MnO_2 (curves 3, 4). t = 90° C, $^3\tau$ = 1 hr.

Card 5/6

Catalytic Action of Iron Compounds in the Oxidation of Uranium (IV) in Acid Media. Letter to the Editor

78331
SOV/89-8-3-16/32

i.e., iron ions figure as electron carrier between the oxidizers and uranium. There are 3 figures; and 4 references, 2 U.K., 2 U.S. These are: T. Arden, Chemist, 32, 376, 202 (1956); I. Arthur, R. Wheeler, J. South African Institute of Min. and Met., 57, Nr 11, 631 (1957); A. Gandin, R. Schuhmann, J. Metals, 8, Nr 8, 1065 (1956); A. Thunaes, Canad. Mining J., 77, Nr 6, 123 (1956).

SUBMITTED: July 17, 1959

Card 6/6

NESMEYANOVA, G.M., CHERNUSHEVICH, N.K.

Behavior of minerals associated with uranium in the process of the acid leaching of ores. Atom. energ. 9 no.2:137-138 Ag '60. (MIRA 13:8)

(Uranium ores)

23738

S/089/61/010/006/003/011
B102/B212

21.3200

AUTHOR: Kesmeyanova, G. M., Alkhazashvili, G. M.

TITLE: Study of the effect of certain compounds on the oxidation of uranium in acid media

PERIODICAL: Atomnaya energiya, v. 10, no. 6, 1961, 587 - 591

TEXT: In hydrometallurgical ore processing the chief portion of the uranium losses are due to lixiviation processes. Therefore, it is of interest to investigate substances, which could serve as catalysts for the process of turning uranium into solution. While investigating various admixtures the authors did not consider the mechanism of its effect on the uranium oxidation, but determined the effect of the various compounds according to the degree of solubility of the uranium oxides. To accelerate the oxidation of uranium the authors selected compounds of elements with varying valence, which are found in uranium ores. The effect of the compounds was determined in pure uranium oxide and tar by using V_2O_5,

Card 1/4

S/089/61/010/006/003/011
B102/B212

Study of the effect of ...

Co_2O_3, $MnSO_4$, $CuSO_4$, $CoSO_4$, $FeSO_4$ and iron minerals (hematite, siderite, and covellite) and a method described previously ("Atomnaya energiya" 8, vyp. 4, 330 (1960)). The admixtures of this compound amounted to 0.5% with respect to the weighed sample of mixed uranium or tar MnO_2 served as oxidizer, also potassium chlorate and nitric acid in a sulphate medium. The studies showed that admixtures of vanadium, copper and iron ions can bring about a complete oxidation of the uranium at relatively low sulphuric acid concentrations. Cu^{2+} ions acting for three hours at 90°C on the uranium oxidation by MnO_2 and a sulphuric acid concentration of 10 - 25 g/l, effected an increase of the yield by 9 - 12%. The catalytic effect of the copper ions will increase very rapidly if Fe^{2+} is also present. The presence of Cu^{2+} and Fe^{2+} at nitric acid concentrations of 10 g/l will increase the degree of uranium oxidation from 28 to 100%, if the concentration measures 5 g/l, from 12 to 82%. Increasing the sulphuric acid concentration will also improve the oxidation, e.g.; an increase from 5 to 150 g/l will change it from 52 to 86% (for oxidation by MnO_2)

Card 2/4

Study of the effect of ...

or from 24 to 67% (for oxidation by potassium chlorate). The catalytic effect of the oxidation by Cu^{2+} and Fe^{2+} may be explained by the following reaction:

$$2Fe^{2+} + MnO_2(4H^+) \rightarrow 2Fe^{3+} + Mn^{2+} + 2H_2O;$$

$$Fe^{2+} + Cu^{2+} \rightleftarrows Cu^{+} + Fe^{3+};$$

$$2Cu^{+} + MnO_2(+4H^+) \rightarrow 2Cu^{2+} + Mn^{2+} + 2H_2O;$$

$$U^{4+} + 2Fe^{3+} \rightarrow U^{6+} + 2Fe^{2+}.$$

Such effect of the ions is also expected from such ions, as are found in mineral compounds also passing into solution. It has been found that an addition of 0.5% hematite to the mixed uranium oxide will accelerate the oxidation but much less than iron ions found in easily soluble salts. The catalytic effect is, therefore, a function of their solubility. Furthermore, it was found that the uranium oxidation by potassium chlorate, MnO_2 and Co_2O_3 will accelerate the reaction at a nearly equal rate. The easily soluble compounds $MnSO_4$ and $CoSO_4$ will accelerate the oxidation

Study of the effect of ...

process differently. Vanadium compounds exhibited the highest catalytic effect. They are able to transform mixed uranium oxide completely into solution when having an acid concentration of 10 g/l (not only chlorate but also MnO_2 had been used as oxidizer). There are 6 figures and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc. The non-Soviet-bloc reference reads as follows: R. Bailes, I. Magner. Mines. Mag., 47, No. 6, 51 (1957).

SUBMITTED: May 28, 1960

Card 4/4

NESMEYANOVA, G.M.

Effect of the nature of the oxidizer on the passage of uranium into solution. Atom.energ. 11 no.5:456-458 N '61. (MIRA 14:10)
(Uranium-Isotopes) (Oxidizing agents)

40051

S/089/62/013/002/005/011
B102/B104

18.3000

AUTHORS: Alkhazashvili, G. M., Nesmeyanova, G. M.

TITLE: Characteristics of uraninite dissolution in sulfuric acid solutions with oxidizing agents

PERIODICAL: Atomnaya energiya, v. 13, no. 2, 1962, 170-177

TEXT: Uraninite, one of the most important minerals present in uranium ores, always contains various impurities, which have an important influence on uranium extraction. The iron compounds in uraninite are of special importance. Their influence on the extractability of uranium depends on the oxidizing agent used: Manganese dioxide has an accelerating effect whereas nitric acid may exert an inhibitory effect. Eight uraninites of different origin were used to study the effect of impurities on the extraction process. They contained up to 70% U with SiO_2, Fe_2O_3, FeO, $Al_2O_3P_2O_5$, CaO, MgO, MnO, V_2O_5 and CuO as impurities; some of the specimens contained no FeO, P_2O_5, MnO, V_2O_5 or CuO. In each case the effect of solution

Card 1/2

S/089/62/013/002/005/011
B102/B104

Characteristics of uraninite ...

concentration, temperature, and test period on the extraction process was studied by using either manganese dioxide or nitric acid as oxidizing agents. The experiments confirmed the results obtained earlier by the same authors (Atomnaya energiya, 8, no. 4, 330, 1960; 11, no. 5, 456, 1961) according to which the course of extraction is governed mainly by the chemical and mineralogical composition. Concerning the advantages of an addition of iron compounds to uraninites containing little impurities the results got by Michal and Porter (Patent USA (US AEC), 2890933, June 16, 1959) were confirmed. There are 6 figures and 5 tables.

SUBMITTED: June 17, 1961

Card 2/2

NESMEYANOVA, G.M.; VIKULOV, A.I.

Mechanism of oxidation of bivalent iron ions by manganese dioxide in uranium hydrometallurgy. Zhur.prikl.khim. 35 no.5: 989-994 My '62. (MIRA 15:5)

(Iron)
(Manganese oxides)
(Uranium--Metallurgy)

SPITSYN, Vikt.I.; KANEVSKIY, Ye.A.; NESMEYANOVA, G.M.

Reply to the letter by O.A.Songina, Z.B.Rozhdestvenskaia on the article by Vikt.Spitsyn, G.M.Nesmeianova, E.A.Kanevskii. Zhur.neorg.khim. 8 no.3:782 Mr '63. (MIRA 16:4)

(Uranium oxides) (Solution (Chemistry)) (Songina, O.A.) (Rozhdestvenskaia, Z.B.)

ALKHAZASHVILI, G.M.; NESMEYANOVA, G.M.; KUZ'MINA, L.N.

Effect of iron minerals contained in ores on uranium oxidation in acid media. Atom. energ. 15 no.4:313-317 O '63. (MIRA 16:10)

ACCESSION NR: AP4015560 S/0089/64/016/002/0130/0134

AUTHORS: Nesmeyanova, G.M.; Vikulov, A.I.

TITLE: The effect of certain halogen compounds on U(IV) oxidation in a sulfuric acid medium

SOURCE: Atomnaya energiya, v. 16, no. 2, 1964, 130-134

TOPIC TAGS: fluorine ion, halogen, Volkov method, uranium oxidation, halide, uranium solution, manganese dioxide, tetravalent uranium, ammonium persulfate, ion concentration, hydrogen ion

ABSTRACT: A study has been made of the possible catalytic acceleration of the oxidation reaction of uranium dioxide by manganese dioxide and ammonium persulfate through the introduction of halogen-containing compounds into the reaction mixture. Inasmuch as halogen ions are easily oxidized in acid solutions in the presence of oxidizers, it may be assumed that the introduction of halogen-containing salts into the solution of uranium dioxide would facilitate the oxidation of uranium. The tests were made in the open air and

Card 1/2

ACCESSION NR: AP4015560

in a nitrogen atmosphere (without an oxidizer) in order to determine the effect of oxygen on uranium oxidation. The tests made in a nitrogen atmosphere revealed that the uranium solubility is 50% lower than in the open air, regardless of the halogen ion. In the oxidation of uranium dioxide by ammonium persulfate in the presence of 5% (of UO_2 weight) fluorine ions, almost all of the uranium changes to a solution. An increase in the ion concentration in the solution during the oxidation of UO_2 by ammonium persulfate has practically no effect on the solubility of the uranium. Orig. art. has: 3 figures, 4 formulas and 3 tables.

ASSOCIATION: None

SUBMITTED: 14Feb63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: CH NO REF SOV: 009 OTHER: 009

Card 2/2

L 31409-66 EWT(m) ES/GD

ACC NR: AT6009940 (A) SOURCE CODE: UR/0000/65/000/000/0191/0197

38
B+1

AUTHOR: Nesmeyanova, G. M.; Vikulov, A I.

ORG: none

TITLE: Oxidation of UO_2 with ozonized oxygen in a carbonate-bicarbonate medium

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v oblasti khimii i tekhnologii mineral'nykh soley i okislov (Studies in the field of chemistry and technology of mineral salts and oxides). Moscow, Izd-vo Nauka, 1965, 191-197

TOPIC TAGS: carbonate, uranium, ozone, oxidation kinetics

ABSTRACT: UO_2 was oxidized with molecular and ozonized oxygen in a sodium carbonate solution, and the effect of solvent concentration (10—100 g Na_2CO_3 per liter), time (15—360 min), and temperature (20—90C) on the oxidation of uranium was studied. It was found that as the Na_2CO_3 concentration rises, the degree of oxidation of uranium (ϵ) increase independly of temperature. As the temperature increases from 20 to 70C, the oxidation is also favorably affected, but a further rise in temperature to 80—90C decreases ϵ by a factor of 2. Substitution of ozonized oxygen for molecular oxygen accelerates the oxidation markedly. In a sodium carbonate-bicarbonate mixture, ϵ at 80C is less than at 20C, but when the $Na_3CO_3/NaHCO_3$ ratio is stoichiometric, the oxidation of uranium is more extensive than in

Card 1/2

L 31409-66

ACC NR: AT6009940

Na_2CO_3 solution. The effect of the surface area of UO_2 on the oxidation of U(IV) with ozonized oxygen was determined. Introduction of compounds of Fe(II), Mn(II), Co(II), or Ni(II) into the reaction mixture lowers ϵ. The negative influence of these compounds can be reduced by introducing iron ferrocyanides into the reaction mixture, which are soluble in the carbonate medium. Orig. art. has: 4 fig. and 5 tables.

SUB CODE: 07 / SUBM DATE: 04May64 / ORIG REF: 009 / OTH REF: 007

Card 2/2

NESMEYANOVA, G.M.; VINOGLOV, A.I.

Oxidation of UO_2 by oxygen enriched with ozone in a perchloric acid medium. Zhur. prikl. khim. 38 no.1:28-33 Ja '65.
(MIRA 18:3)

1. NEVSKIY, V. P.

2. USSR (600)

4. Plant Lice-Kazakhstan

7. Study of the plant lice fauna (Homoptera, Aphidoidea) of southern Kazakhstan. Trudy Vses. ent. obshch. 43, 1951

9. Monthly Lists of Russian Accessions, Library of Congress, March 1953, Unclassified.

GAMBARYAN, N.P.; NESMEYANOVA, G.S.; KNUNYANTS, I.L.

Synthesis of bis-epoxypropyl ether of 2,2-bis-(p-oxyphenyl)-hexafluoropropane and of a copolymer based on it. Zhur.VKHO 7 no.2:231 '62. (MIRA 15:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
(Ethers) (Epoxy resins)

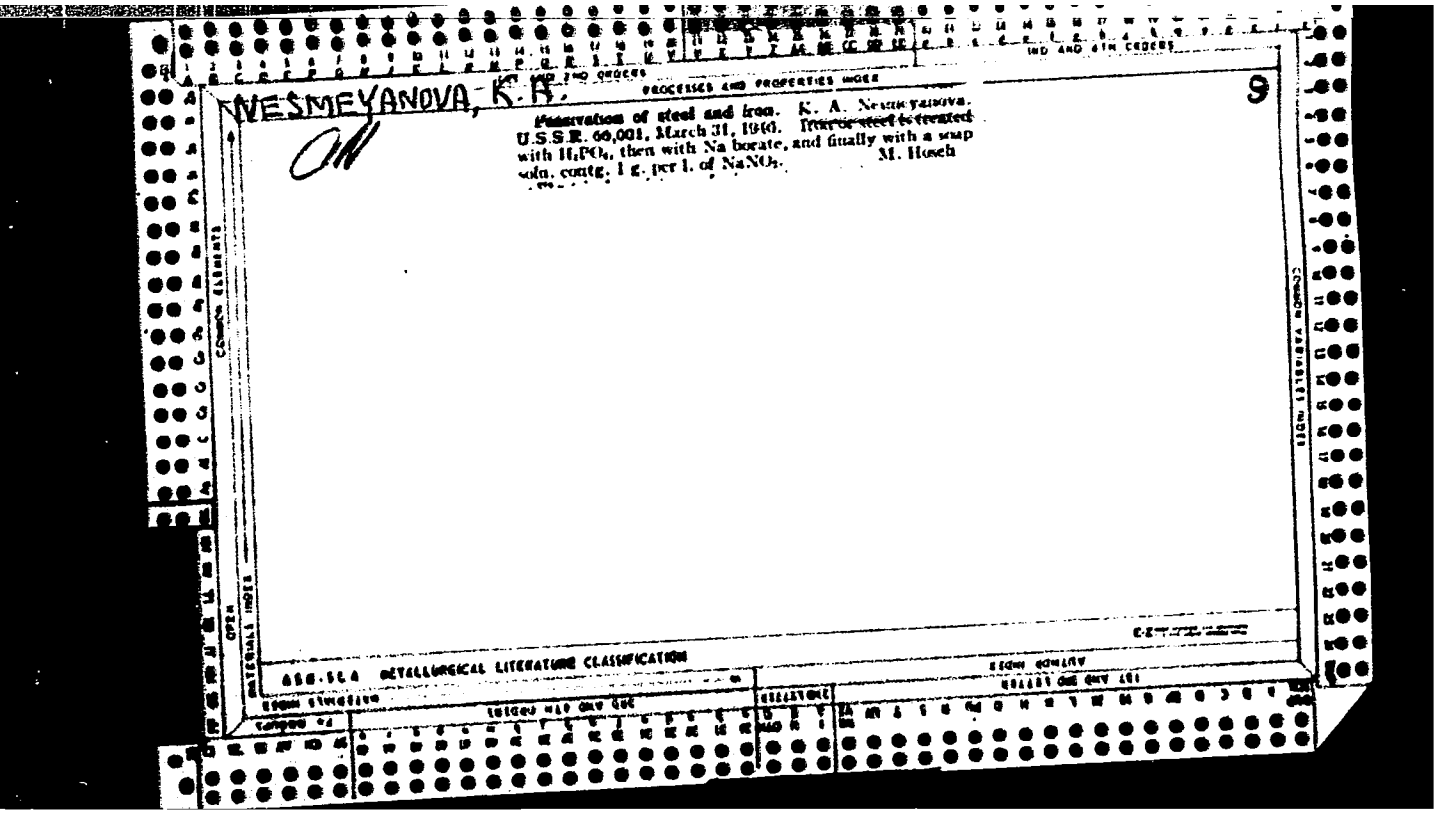
GVOZDETSKIY, N.A., prof.; ZHUCHKOVA, V.K., dots.; ALISOV, B.P., prof.; VASIL'YEVA, I.V., dots.; VARLAMOVA, M.N., tekhnik-kartograf; DOLGOVA, L.S., dots.; ZVORYKIN, K.V., st. nauchnyy sotr.; ZEMTSOVA, A.I., assistent; IVANOVA, T.M.; LEBEDEV, N.P., st. prepodavatel'; LYUBUSHKINA, S.G.; NESMEYANOVA, G.Ya., mlad. nauchnyy sotr.; PASHKANG, K.V., st. prepod.; POLTARAUS, B.V., dots.; RYCHAGOV, G.I., st. prepod.; SPIRIDONOV, A.I., dots.; SMIRNOVA, Ye.D., mlad. nauchnyy sotr.; SOLNTSEV, N.A., dots.; FEDOROVA, I.S., mlad. nauchnyy sotr.; TSESEL'CHUK, Yu.N., mlad. nauchnyy sotr.; SHOST'INA, A.A., mlad. nauchnyy sotr.; Prinimali uchastiye: BELOUSOVA, N.I.; GOLOVINA, N.N.; KALASHNIKOVA, V.I.; KOZLOVA, L.V.; KARTASHOVA, T.N.; PAN'KOVA, L.I.; URKIKHO, V.; PETROVA, K.A., red.; LOPATINA, L.I., red.; YERMAKOV, M.S., tekhn. red.

[Physicogeographical regionalization of the non-Chernozem center] Fiziko-geograficheskoe raionirovanie nechernozemnogo tsentra. Pod red. N.A.Gvozdetskogo i V.K.Zhuchkovoi. Moskva, Izd-vo Mosk. univ., 1963. 450 p. (MIRA 16:5)
(Physical geography)

NIKOLAYENOVA, G.Ye.

Agricultural regionalization of the Central Economic-Geographic Region. Vest. Mosk. un. ser. 5 Geog. 19 no.3:25-30 My-Je '64. (MIRA 17:6)

1. Kafedra ekonomicheskoy geografii SSSR Moskovskogo universiteta.



NESMEYANOVA, K.A.
CA

9

A chemical process for the removal of rust and scale from iron and steel. K. A. Nesmeyanova. *Vestnik Mashinostroeniya* 27, 73–4(1947); *Chem. Zentr.* 1948, II, 915.—The metal surface is first freed from grease by treatment with gasoline, benzene, alc., and ether. It is then treated with 10, 15, or 20% orthophosphoric acid, washed in running water, neutralized, and rendered passive by treatment with borax or soda soln. (10 g./l.) or with Na or K nitrate (1 g./l.), and dried. The metal surface is protected from further oxidation by the formation of a film of basic Fe phosphate. The method can be used for the removal of rust from precision instruments and for the removal of scale after heat-treatment. M. G. Moore

1951

NESMEYANOVA, K. A.
25578

Elektroliticheskaya polrovka cherryka metallov. V. sb: Korroziya, zashchita ot korrozii i elektroliz. M. 1948, s. 139-55.--Bibliogr: 34 Nazv.

SO: LETOPIS NO. 30, 1948

NESMEYANOVA, K.A.

137-58-5-10221

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 5, p 191 (USSR)

AUTHORS: Nesmeyanova, K.A., Gintsberg, S.A.

TITLE: Ethanolamine Derivative Mixtures as Steel Corrosion Inhibitors (Smesi proizvodnykh etanolaminov v kachestve zamedliteley korrozii stali)

PERIODICAL: Tr. Gos. n.-i. in-ta khim. prom-sti, 1956, Nr 4, pp 3-10

ABSTRACT: An investigation is made of the protective properties of the carbonate and benzoate salts of mono- and triethanolamine, and also of mixtures of these salts with one another and with monoethanolamine, relative to atmospheric corrosion of steel. The conclusions are based on the results of corrosion testing of specimens packed in paper impregnated with these compounds in a room with an 85% relative humidity and a temperature of 22-35°C. The evaluation was based on the size of the corroded surface and the number of specimens affected by corrosion. The best protective properties are those of paper impregnated with a mixture of 4.5 g monoethanolamine and 7.0 g monoethanolamine benzoate per m^2 of paper. V. P.

Card 1/1 1. Corrosion inhibitors--Effectiveness --Properties 2. Ethanolamine derivatives

NESMEYANOVA, K.A.

GINTSBERG, S.A.; NESMEYANOVA, K.A.

Determination of amino - monoethanol and benzoic acid in the inhibited paper. Trudy NIIKHP no.4:11-16 '56. (MIRA 11:4)
(Ethanol) (Benzoic acid)

137-58-4-7850

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 212 (USSR)

AUTHOR: Nesmeyanova, K. A.

TITLE: Copper Plating from a Hydrofluoboric Electrolyte (Gal'vaniches-kiye osadki medi iz borftoristo-vodorodnogo elektrolita)

PERIODICAL: Tr. Gos. n.-i. in-ta khim. prom-sti, 1956, Nr 4, pp 51-54

ABSTRACT: Previously published data on the advantages of hydrofluoboric electrolytes, from which Cu platings may be obtained at D_k of up to 25 amps/cm^2 and with 100 percent anode and cathode current efficiency, are confirmed. Anodic and cathodic polarization curves in the electrolyte are adduced.

V. P.

1. Copper plating--Electrolyte factors 2. Electrolytes--Copper plating--Effectiveness

Card 1/1

137-58-4-8674

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 336 (USSR)

AUTHOR: Nesmeyanova, K.A.

TITLE: A Method for Determining Nickel, Boron, and Fluorine in a Bath of Nickel Fluoroboride (Metodika opredeleniy nikelya, bora i ftora v nikelevom borftoristovodorodnom elektrolite)

PERIODICAL: Tr. Gos. n.-i. in-ta khim. prom-sti, 1956, Nr 4, pp 55-60

ABSTRACT: Methods of determining Ni, B, and F are described. A relationship between the specific gravity of the electrolyte (E) and the Ni content of the solution is established. To determine B, the fluoroboride complexes are first decomposed by $CaCl_2$, and HBO_3 is separated out by invert sugar and then titrated with caustic. The F content found in the form of BF_3OH is determined by cold titration with caustic after addition of $CaCl_2$, and the F in the form of BF_4^{1-} by caustic titration after boiling the solution. 10-25 cc of E is diluted with water to 250 cc, a 10 to 25 cc aliquot part is taken, to which 25-30 cc water, 5-6 cc 5% Na pyrophosphoric acid, and NH_4OH are added until a mild odor results; titration follows by an alkaline solution of dimethylglyoxime (I) (11.6 g I is dissolved in 100 cc 2N NaOH solution,

Card 1/2

A Method for Determining (cont.)

the volume being brought up to 1 liter). The end of titration is determined by a drop test on I paper. B is determined in 10 cc E after separation of the Ni by caustic soda and breakdown of the B complex by boiling with $CaCl_2$. Determination ends by titration with caustic in the presence of invert sugar. To 10 cc dilute E are added 4 cc 5 M $CaCl_2$ solution, and mixing follows. After it has been allowed to stand for 8 minutes, the solution is titrated by decinormal caustic soda with methylred. The content of the flask is then boiled with a reflux condenser for 20 min, cooled, and titrated with decinormal caustic solution, and boiled again. If the solution turns rosy, it is titrated further with caustic.

A. M.

1. Nickel--Determination 2. Boron--Determination 3. Fluorine--Determination

Card 2/2

BALEZIN, S.A.; BARANNIK, V.P.; NESMEYANOVA, K.A.; GINTSBERG, S.A.

Corrosion factors and means of protecting needles during long storage. Uch. zap. MGPI 99:151-157 '57. (MIRA 12:3)

(Steel--Corrosion) (Pins and needles)

NESMEYANOVA, K.A.

25(1) PHASE I BOOK EXPLOITATION SOV/3161

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti, Kiyevskoye oblastnoye pravleniye

Zashchitno-dekorativnyye i spetsial'nyye pokrytiya metallov (Protective, Decorative, and Special Coatings for Metals) Kiyev, Mashgiz, 1959. 291 p. 4,200 copies printed.

Editorial Board: P. K. Lavorko, E. I. Litvak, and A. F. Kychis (Resp. Ed.); Ed. of Publishing House: M. S. Soroka; Chief Ed. (Southern Division, Mashgiz): V. K. Serdyuk, Engineer.

PURPOSE: This book is intended for technical personnel in the field of protective coatings for metals.

COVERAGE: The papers in this collection, presented at a conference of the NTO Mashprom held in Odessa, deal with the mechanization and acceleration of metal-coating and plating processes performed by spraying, electrolytic, and other methods. Quality control of protective coatings is also discussed. No personalities are mentioned. References follow several of the papers.

GERASIMOVSKIY, V.I.; NESMEYANOVA, L.I.

Distribution of lead and zinc in rocks of the Lovozero Massif.
Geokhimiia no.7:590-593 '60. (MIRA 13:11)

1. V.I. Vernadskiy Institute of Geochemistry and Analytical Chemistry, Academy of Sciences, U.S.S.R., Moscow.
(Lovozero Tundras--Rocks, Igneous)
(Lead) (Zinc)

GERASIMOVSKIY, V.I.; PAVLENKO, L.I.; NESMEYANOVA, L.I.

Geochemistry of molybdenum in nepheline syenites. Geokhimiia no.1:9-15 Ja '65. (MIRA 18:4)

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR, Moskva.

GERASIMOVSKIY, V.I.; PAVLENKO, L.I.; NESMEYANOVA, L.I.

Geochemistry of beryllium in nepheline syenites. Geokhimiia no.5: 562-573 My '65. (MIRA 18:9)

1. Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR, Moskva.

NESMEYANOVA, M.A.; BOGDANOV, A.A.; PROKOF'YEV, M.A.

Alkaline phosphatase linked with ribosomes in Escherichia coli.
Biokhimiia 30 no. 3:463-470 My-Je '65 (MIRA 19:1)

1. Laboratoriya khimii belka khimicheskogo fakul'teta Gosudarstvennogo universiteta imeni Lomonosova, Moskva.

NEFELOVA, M.V.; NESMEYANOVA, M.I.

Formation of aurantin in media with some [illegible] acids. Nauch. dokl. vys. shkoly; biol. nauki no.2:92-[illegible] '66. (MIRA 19:2)

1. Rekomendovana laboratoriyey antibiotikov Moskovskogo gosudarstvennogo universiteta. Submitted March [illegible], 1965.

NESMEYANOVA, M. S.

"Sanitary Protection of Reservoirs From Pollution by Waste Waters of the Reclaimed Rubber Industry." Sub 10 Sep 51, First Moscow Order of Lenin Medical Inst.
Cand Med Sc.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

NESMEYANOVA, M.S.

Permissible phenol concentrations in water supply. Gig. sanit., Moskva no.7:11-13 July 1953. (CIML 25:1)

1. Of the Department of Communal Hygiene of Leningrad Sanitary Hygiene Medical Institute and of the Department of Communal Hygiene of First Moscow Order of Lenin Medical Institute.

AGGEYEV, P.K.; NESMEYANOVA, M.S.; ROZENFEL'D, A.S.; RUDEYKO, V.A.

Hygiene of houses of collective farmers and methods for their improvement. Trudy LSGMI 26:193-199 '56. (MLRA 10:6)

1. Kafedra kommunal'noy gigiyeny Leningradskogo sanitarno-gigiyenicheskogo meditsinskogo instituta. Zav. kafedroy - prof. P.K.Aggeyev.

(RURAL CONDITIONS,
hyg. of living quarters on collective farms in Russia (Rus))

MESNEYALOVA, M. S., RUDENKO, V. I., ROSENFEL'D, I. S., ALEKSEEV, P. A.

"Hygienic evaluation of kolkhoz living quarters and means of its sanitary amelioration."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1958.

NESMEYANOVA, M.Ya. [Nesmieianova, M.E.]

Potentials of the merchandise turnover plan in drugstores. Farmatsev. zhur. 15 no.6:76-78 '60. (MIPA 14:11)

1. Keruyucha aptekoy No.97, s.Zabuyannya, Kiivs'koi oblasti.
(KIEV PROVINCE—DRUGSTORES)

NESMEYANOVA, N.P.

BALANDIN, A.D.; NESMEYANOVA, N.P.

Compound microscopical examination of vaginal smears. Akush. i gin. no.4:73-76 Jl-Ag '55. (MLRA 8:11)

1. Iz 2-y gorodskoy bol'nitsy g. Kemerovo.
(VAGINAL SMEARS
exam. diag. value in gyn. dis.)
(GYNECOLOGICAL DISEASES, diag.
vaginal smears, method of exam.)

NESMEYANOVA, O. A.

USSR/ Chemistr - Displacement

Card : 1/1

Authors : Nesmeyanov, A. N., Academician, Perevalova, E. G., Golovnya, R. V. and Nesmeyanova, O. A.

Title : Reactions of ferrocene hydrogen displacement

Periodical : Dokl. AN SSSR, 97, Ed. 3, 459 - 461, July 21, 1954

Abstract : The remarkable thermal and chemical stability, resistance to pyrolysis, acids and alkalis, of ferrocene (dicycloferropentadiene), are discussed. Ferrocene cannot be nitrated, sulfonated or halogenated but shows a great tendency toward displacement reactions. During proper metallization ferrocene is capable of forming mixed organo-metallic compounds the chemical structures of which are described. Three USA and 1 German references.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : May 20, 1954

USSR/ Chemistry

Card 1/2 Pub. 22 - 18/47

Authors : Nesmeyanov, A. N., Academician,; Perevalova, E. G.; and Nesmeyanova, O. A.

Title : Halide compounds of ferrocene

Periodical : Dok. AN SSSR 100/6, 1099-1101, Feb 21, 1955

Abstract : The various halide compounds formed during the reaction of ferrocene with iodine or bromine are listed. Heating of ferrocene with Br in carbon tetrachloride results in the disintegration of the ferrocene and formation of pentabromocyclopentane with melting point of 103 -104°.

Institution : The M. V. Lomonosov State University, Moscow

Submitted : December 30, 1954

Periodical : Dok. AN SSSR 100/6, 1099-1101, Feb 21, 1955

Card 2/2 Pub. 22 - 18/47

Abstract : The reaction of ferrocene with iodine in an organic solvent resulted in the formation of a complex containing about 93% iodine which corresponds to twenty iodine atoms per ferrocene molecule. The chemical properties of the complex are described. Three references: 1 USA, 1 USSR and 1 German (1952-1954). Graphs.

AUTHORS: Nesmeyanov, A. N., Member of the Academy, [illegible]
Perevalova, E. G., Nesmeyanova, O. A.

TITLE: Diferrocenyl Mercury Reactions
(Reaktsii diferrotsenilrtuti)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. [illegible], No 2, pp. 288-291 (USSR)

ABSTRACT: As it was proved already the ferrocene mercury derivatives produced by the authors for the first time (ref 1) can be used for the synthesis of the ferrocene derivatives. The authors produced haloid ferrocenes by means of [illegible] with iodine and bromine (ref 2). In the present [illegible] interaction of the derivative mentioned in the [illegible] triphenyl chloromethane, with haloid anhydrides of the carboxylic and sulfonic acids, with thionyl chloride (in statu nascendi) and with selenium tetrabromide was utilized. Diferrocenyl mercury reacts with triphenyl chloromethane under not rigourous conditions and produces ferrocenyl triphenylmethane with a yield of 18 % of the theoretically possible yield and a small amount of ferrocene.

Card 1/4

Reaction takes place under greater difficulties with sulfonic acids chloranhydrides. Thus, diferrocenylsulfone and phenyl ferrocenylsulfone are produced in a yield of 5-6 % on the heating of diferrocenyl mercury with chloranhydrides of the ferrocene and benzene sulfonic acid. On this occasion 35-38 % of the diferrocenyl mercury are converted into ferrocene. Reaction with acetyl chloride takes placed even under greaten difficulties. Acetyl ferrocene only forms in a yield of 1 % and ferrocene forms in great quantities as described above. Diferrocenyl mercury does not react at all with benzoyl chloride. Reactions take place more easily with sulfo iodides. In the reaction with iodine anhydride of the benzene sulfonic acid phenyl ferrocenyl sulfone forms in a yield of 22 %. Diferrocenyl mercury forms a complex with thiocyanogen excess. If the latter is processed by means of a watery solution of sodium thiosulfate diferrocenyl disulfide forms in a yield of 15 % calculated with reference to the mercury compound which entered reaction. 12 % of the diferrocenyl mercury remain unchanged. Probably the originally formed

thiocyanogen ferrocene is reduced into disulfide by the action of thiosulfate; moreover, 25 % of the diferrocenyl mercury which entered the reaction are converted into ferrocene. With $SeBr_4$ the mentioned compound forms diferrocenyl selenium in a yield of 21 %. On this occasion selenium is reduced to bivalence. In all cases the reaction product is precipitated either totally or partly in an oxidized (ferricinium) form and is then reduced by sodium thiosulfate. Thus, the important nucleophilic activity of the C-atoms in ferrocene (easy electrophilic substitution of the H atoms of the cyclopentadienyl rings) is expressed also in the properties of the mercury derivatives of ferrocene: diferrocenyl mercury reacts with sulfohalides under slighter conditions than diphenyl mercury (refs 3,4). The occurrence of ferrocene in all reactions investigated (except for $SeBr_4$) as by-product is possibly due to the forming of the ferrocenyl radical which carries along the hydrogen from the solvent or from other ferrocenyl groups. An experimental part with the usual data follows.

Diferrocenyl Mercury Reactions 20-119-2-27/60

There are 4 references, 2 of which are Soviet

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: December 25, 1957

Card 4/4

NAKHAPETYAN, L.A.; NESMEYANOVA, O.A.; SAFONOVA, I.L.; IOZA, G.V.; OVODOVA, V.A.; LUK'INA, M.Yu.

Preparation of trimethylene chlorobromide. Zhur. prikl. khim. 37 no.8:1808-1811 Ag '64. (MIRA 17:11)

20-119-5-30/59

AUTHORS: Nesmeyanov, A. N., Member, Academy of Sciences, USSR, Perevalova, E. G., Churanov, S. S., Nesmeyanova, O. A.

TITLE: The Reactions of Ferrocene Sulfonic Acids (Reaktsii ferrotsensul'fokislot)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 5, pp. 949-952 (USSR)

ABSTRACT: After having described ferrocene by various sulfonating reagents and some derivatives of ferrocene sulfonic acids in an earlier paper (reference 1) the authors in the present paper deal with a number of further sulfurous substituted ferrocenes which they obtained. Further an attempt was made to realize the exchange reaction of the sulfo group. By interaction of the lead salt of ferrocene disulfonic acid $Fe(C_5H_4SO_3)_2Pb.4H_2O$ with phosphorus trichloride they obtained monochlor anhydride $ClSO_2C_5H_4FeC_5H_4SO_3H$. Phosphorus oxychloride with the lead salt of the di-acid forms the acid dichloride of ferrocene disulfonic acid. The lead salt of monosulfonic acid is

Card 1/4

group by a hydroxyl (by melting together with alkali), by cyanogen (by means of the influence of potassium ferricyanide) or by a formyl group (by means of heating with sodium formiate); all these attempts led to a complete destruction of the ferrocene nucleus, where either ferric hydroxide or iron salt were liberated. The hydrolysis of sulfonic acids under formation of ferrocene also failed. The stability of the linkages of iron with the cyclopentadienyl rings is apparently highly reduced under the influence of the sulfo groups, as compared with ferrocene. The introduction of a sulfo group reduces the susceptibility to further substitutions, to a high degree in the same cyclopentadienyl ring and to a much lower degree in the other ring (ref 1). The influence exerted by the sulfo group upon the reactivity of the ferrocene nucleus is similar to that of the acetyl group (reference 5). An experimental part with the usual data follows. There are 5 references, 4 of which are Soviet.

Card 3/4

The Reactions of Ferrocene Sulfonic Acids

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 16, 1958

Card 4/4

NESMEYANOVA, O. A., Candidate Chem Sci (diss) -- "The mercurization of ferrocene and the synthesis of mercury derivatives on this basis". Moscow, 1959. 6 pp (Moscow State U im M. V. Lomonosov), 150 copies (KL, No 25, 1959, 128)

5 (2,3)
AUTHORS: Nesmeyanova, O. A., Perevalova, E. G. SOV/20-126-5-26/69

TITLE: Diferrocenyl (Diferrotsenil)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 1007 - 1008 (USSR)

ABSTRACT: In order to produce diferrocenyl the authors have investigated the decomposition of diferrocenyl-mercury in the presence of palladium black. When heating mercury-organic compounds with metal powders without solvents, a radical doubling occurs (Ref 1). Thus, in the case of diphenyl-mercury, a satisfactory yield of diphenyl is obtained. In the present case, however, diferrocenyl is formed, but the yield is small. The main reaction product was ferrocene (Refs 2,3). Further in organic solvents insoluble substances, probably ferrocene-polymers were formed. The formation of ferrocene can apparently only be explained by the disproportioning of the ferrocenyl radicals formed as intermediate products. From these radicals ferrocene is formed, as well as its polymer or diferrocenylene. Yields are shown by table 1. The separation of ferrocene and diferrocenyl is described. Besides, the existence of the said polymers among the reaction products is proved. Diferrocenyl is an orange-colored

Card 1/2

Diferrocenyl SOV/20-126-5-26/69

crystalline substance, easily soluble in benzene, but less easily soluble in petroleum ether, ether, and alcohol. It crystallizes from alcohol. Diferrocenyl is thermally less stable than ferrocene. It becomes dark at 205°, and melts at 230° under partial decomposition. In this manner no ferrocene is formed. Consequently, the ferrocene forming in the catalytical splitting of the diferrocenyl-mercury is not a product of the chemical decomposition of diferrocenyl. There are 1 table and 3 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: April 14, 1959, by A. N. Nesmeyanov, Academician

SUBMITTED: April 10, 1959

Card 2/2

S/020/60/132/04/33/064
B011/B003

5.3700(B)

AUTHORS: Perevalova, E. G., Nesmeyanova, O. A., Luk'yanova, I. G.

TITLE: Ferrocenesulfinic Acids

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4, pp. 853-856

TEXT: In a previous paper the authors described the production of ferrocenesulfinic acid (Ref. 1). In the article under review, they synthesized ferrocenedisulfinic acid and examined the properties of both acids. Ferrocenedisulfinic acid was obtained by reduction of the acid chloride of ferrocenedisulfonic acid with zinc dust. It is difficultly soluble in water and organic solvents. Its solutions are rapidly decomposed, and its disodium salt is much more stable. Both mono- and diferrocenesulfinic acid react with sublimates in a similar way as benzosulfinic acid and yield large quantities of mono- and di-(chloromercury)-ferrocene. The authors tried to obtain in a similar way a ferrocene derivative of tin by actioh of tinchloride on the sodium salt of sulfinic acid. They found, however, that a reduction

Ferrocenesulfinic Acids

S/020/60/132/04/33/064
B011/B003

results from which the tin dithioferrocenolate is formed. Previously (Ref. 2) the authors obtained phenylferrocenyl sulfone and diferrocenyl sulfone by the action of halogen anhydrides of the corresponding sulfonic acids on diferrocenyl mercury. Here, the authors synthesized benzyltriphenylmethyl- and picrylferrocenyl sulfone. For this purpose the sodium salt of ferrocenemonosulfinic acid was reacted with benzyl chloride, triphenylchloromethane, and picryl chloride, respectively. The authors obtained large yields (80-88% of the theoretical yield) (see Scheme). A large quantity of ferrocenyl (ferrocenylmethyl) sulfone was obtained by heating the aqueous solution of the sodium salt of ferrocenesulfinic acid with iodine methylate of (N,N-dimethylaminomethyl) ferrocene (see Scheme). L. S. Shilovtseva and A. A. Ponomarenko participated in the experiments. There are 5 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

Card 2/3

Ferrocenesulfinic Acids

S/020/60/132/04/33/064
B011/B003

PRESENTED: January 12, 1960, by A. N. Nesmeyanov, Academician

SUBMITTED: January 3, 1960

Card 3/3

PEREVALOVA, E.G.; NESMEYANOVA, O.A.

Synthesis of diferrocenyl by the Ullmann reaction. Dokl.AN SSSR 132 no.5:1093-1094 Je '60. (MIRA 13:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.N. Nesmeyanovym.
(Iron)

33264
S/062/62/000/001/003/015
B106/B101

5.3700

AUTHORS: Nesmeyanov, A. N., Perevalova, E. G., and Nesmeyanova, O. A.

TITLE: Mechanism of ferrocene formation in electrophilic and homolytic reactions of iodoferrocene and mercury derivatives of ferrocene

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1962, 47 - 52

TEXT: In almost all electrophilic and homolytic reactions of iodoferrocene and mercury derivatives of ferrocene, ferrocene is formed as an unexpected by-product. The mechanism of ferrocene formation was studied with the aid of some reactions of diferrocenyl mercury. When boiling diferrocenyl mercury with metallic sodium for 15 min in absolute benzene and subsequently carboxylating the reaction mixture with dry ice, no ferrocene carboxylic acid was obtained but ferrocene (10% of the theoretical value) besides a large portion of the initial product. Reaction of diferrocenyl mercury with $SnCl_2$ in petroleum ether gave 15% of

Card 1/4

Mechanism of ferrocene formation...

ferrocene besides metallic mercury. Reaction of diferrocenyl mercury with $CuCl_2$ in dioxane yielded an inseparable mixture of chloroferrocene and ferrocene. Reaction of copper chloride with 1,1'-di-(mercury chloride) ferrocene yielded a mixture of dichloro ferrocene and ferrocene containing much more ferrocene which could be isolated from the mixture. The formation of ferrocene can be explained in all these cases, if a ferrocenyl radical is assumed to be involved, which either splits a hydrogen atom from the solvent, or, if the latter is absent, even from the ferrocene derivatives. The formation mechanism of this ferrocenyl radical is unclear. The radical can not be formed by thermal splitting of diphenyl mercury because the latter withstands long heating in benzene. Results of previous studies of the authors show that in electrophilic substitutions of mercury in diferrocenyl mercury according to the pattern $(C_5H_5FeC_5H_4)_2Hg \xrightarrow{RX} C_5H_5FeC_5H_4R + (C_5H_5)_2Fe$ the yield of ferrocene decreases with increasing readiness of substitution. The formation of ferrocene during the decomposition of diferrocenyl mercury in the presence of palladium black without solvent, previously observed by two of the present authors, can be attributed to the fact that a ferrocenyl radical is formed as an intermediate product which splits a hydrogen atom from

33264
S/062/62/000/001/003/015
B106/B101

other radicals or from diferrocenyl mercury. To find out whether this was also true for reactions in solvents without hydrogen, the behavior of the ferrocenyl radical in CCl_4 was investigated. An unambiguously radical reaction was already observed when diferrocenyl mercury was heated in absolute CCl_4. This reaction led to the formation of mercury chloride ferrocene (57%), ferrocene (22%), and resins which, in addition to carbon, iron, and hydrogen, also contained chlorine and mercury (in the atomic ratio of 10-12 : 1). When heating diferrocenyl mercury in absolute CCl_4 in the presence of hydroquinone and benzoyl peroxide, neither resins nor mercury chloride ferrocene were formed, but only 12 and 3% ferrocene, respectively, whereas the bulk of diferrocenyl mercury did not react. Addition of antioxidants or radical sources inhibited the reaction, which indicates the chainlike nature of the process. Thus, the following pattern is suggested for the reaction between diferrocenyl mercury and CCl_4:

$$C_5H_5FeC_5H_4^{\cdot} + (C_5H_5FeC_5H_4)_2Hg \rightarrow C_5H_5FeC_5H_5 + C_5H_5FeC_5H_4 - Hg - C_5H_5FeC_5H_4^{\cdot}$$

$$C_5H_5FeC_5H_4 - Hg - C_5H_5FeC_5H_4^{\cdot} + CCl_4 \rightarrow C_5H_5FeC_5H_4 - Hg - C_5H_4FeC_5H_4CCl_3 + Cl^{\cdot}$$

$$Cl^{\cdot} + C_5H_5FeC_5H_4 - Hg - C_5H_5FeC_5H_5 \rightarrow C_5H_5FeC_5H_4HgCl + C_5H_5FeC_5H_4^{\cdot}$$

33264
S/062/62/000/001/003/015
B106/B101

Mechanism of ferrocene formation...

It is concluded that the ferrocenyl radical forms readily and possesses an extremely high selectivity to hydrogen. The combination of two ferrocenyl radicals is not very pronounced. It occurs when heating iodoferrocene with copper without solvent, and also to an insignificant degree, when splitting diferrocenyl mercury in the presence of palladium black. Papers of A. N. Nesmeyanov, V. A. Sazonova, and V. N. Drozd (Dokl. AN SSR 130, 1030 (1960)), and of G. A. Razuvayev et al. (G. A. Razuvayev, M. S. Fedotov, Zh. obshch. khimii 22, 484 (1952); G. A. Razuvayev, M. S. Fedotov, Sb. statey po obshchey khimii, M.-L., Izd. AN SSSR, 2, 1517 (1955); G. A. Razuvayev, M. S. Fedotov, T. N. Zaychenko, N. A. Kul'viyskaya, ibid., p. 1514) are mentioned. There are 1 table and 9 references: 8 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: M. Rausch, M. Vogel, H. Rosenberg, J. Organ. Chem. 22, 900 (1957).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 19, 1961

Card 4/4

NESMEYANOVA, O.A.; LUKINA, M.Yu.; KAZANSKIY, B.A., akademik

Comparative reactivity of hydrocarbons of the cyclopropane series. Dokl. AN SSSR 153 no.1:114-117 N '63.
(MIRA 17:1)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

NESMEYANOVA, O.A.; LUKINA, M.Yu.; KAZANSKIY, B.A., akademik

Reactivity of cyclopropane hydrocarbons as dependent on their structure. Dokl. AN SSSR 153 no.2:357-359 N '63. (MIRA 16:12)

LUKINA, M.Yu.; NESMEYANOVA, O.A.; KHOTINSKAYA, G.A.; [illegible], V.S.; KAZANSKIY, B.A., akademik

Reactivity of alkylcyclopropane of various structure [illegible] by the bromometric method. Dokl. AN SSSR 158 no.3:652-655 [illegible] 64.
(MIRA 17:10)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

NESMEYANOVA, O.A.; RUDASHEVSKAYA, T.Yu.; LUKINA, M.Yu.

Reactions of 1,3,3-trimethylcyclopropene with ethyl magnesium bromide and cuprous oxide salts. Izv. AN SSSR. Ser. khim. no.8:1510 '65. (MIRA 18:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

NESMEYANOVA, S.I.

USSR/Virology - Human and Animal Viruses. E-2

Abs Jour : Ref Zhur - Biologiya, No 1, 1957, 413.

Author : V.G. Baglikova and S.I. Nesmeyanova
Inst :
Title : Reaction of Hemagglutination in Smallpox Vaccine

Orig Pub : Vopr. krayevoy patologii AN UzSSr, 1955, No 6, 129-138

Abst : The possibility of the utilization of the reaction of hemagglutination to discover the virus of smallpox vaccine, and "RTGA" for the quantitative determination of the antibodies to this serum was investigated. Shavings from a pock mark obtained from the skin of a rabbit vaccinated 72 hours before with smallpox lymph from a calf was used as a virus containing material. Reaction of hemagglutination was carried out with chicken erythrocytes in the volume of 0.4 ml. The results were observed one hour after incubation at room temperature. "RTGA" was set in the volume of 0.8 ml with two agglutinizing doses of the

Card 1/3

Abs Jour : Ref Zhur - Biologiya, No 1, 1957, 413

material under investigation. Different series of rabbits showed a reaction of hemagglutination titer of 1:16 to 1:512. The titer in the surface shavings of the infected vaccines was found to be considerably lower than in the shavings of the deeper layers. Hemagglutinins were also found in the material taken from skin shavings of a ram and the heifer. Attempts were made to discover the vaccine virus by a reaction of hemagglutination in isolated mucous membrane of the pharynx, blood, and urine of vaccinated animals and children. In the materials obtained from the mucous membranes of the pharynx and the mouth in which smallpox elements developed, hemagglutinins in dilution 1:128 were found, while in those with cutaneous vaccination hemagglutinins were found in only inconsiderable quantities, and then in only part of the experimental animals (in infection of a large skin area). A reaction

USSR/Virology - Human and Animal Viruses. E-2

Abs Jour : Ref Zhur - Biologiya, No 1, 1957, 413

hemagglutination test of the isolated pharynx, blood, and urine obtained from vaccinated children produced a negative result; in a group of revaccinated children 7 to 8 years of age, the virus in the isolated pharynx was found in dilution of 1:2 to 1:4 in 3 of 10 children beginning from the 2nd to the 20th day after the vaccination. On the basis of their observations the authors come to the conclusion about the inadequate sensitivity of RGA for the discovery of small numbers of the virus. With the aid of "RTGA" an accumulation of antivaccine antibodies in the sera of vaccinated rabbits, calves, and humans was established. On the 12th day after humans were revaccinated, the average titer of antibodies in the serum increased from 51.4 to 300.8.

Card 3/3

NESMEYANOVA, S. I., Cand Med Sci -- (diss) "Reaction of the slowing down of hemagglutination as a method of study of post-vaccinational immunity." Tashkent, 1960. 11 pp; (Ministry of Public Health Uzbek SSR, Tashkent State Medical Inst); 300 copies; price not given; (KL, 25-60, 139)

NESMEYANOVA, S.I.; CHIKRYZOVA, L.G.; BOYKO, V.M.; KORNIYENKO, T.I.; VISHNEVSKAYA, L.F.; VAZHOVA, T.V.

Studying the duration of immunity to smallpox vaccine in Uzbekistan. Med. zhur. Uzb. no.8:65-68 Ag '61. (MIRA 15:1)

1. Iz Tashkentskogo instituta vaktsin i syvorotok (direktor - A.B.Inogamov).
(UZBEKISTAN--SMALLPOX--PREVENTION) (IMMUNITY)

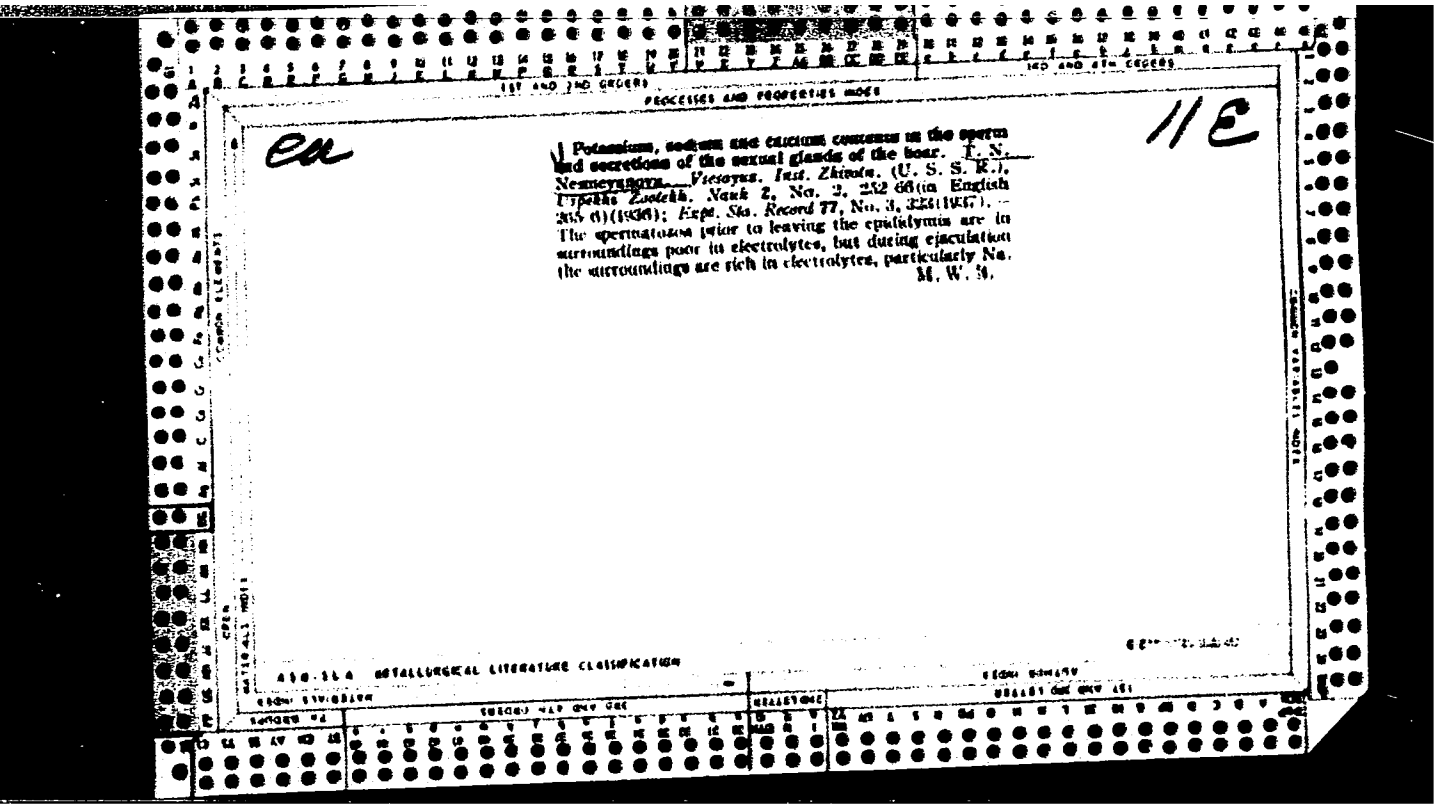
KALININA, Ye.F.; GALKINA, V.S.; ABIDOV, A.Z.; NESMEYANOVA, S.I.

Effect of Co^{60} gamma irradiation on the vaccinia virus and accompanying microflora. Med. zhur. Uzb. no.2:45-46 F '62. (MIRA 15:4)

1. Iz Tashkentskogo nauchno-issledovatel'skogo instituta vaktsin i syvorotok (direktor - A.B.Inogamov).
(VACCINIA) (COBALT--ISOTOPES)

BAGLIKOVA, V.G.; OSTROVSKAYA, S.G.; NESMEYANOVA, S.I.

Study of immunity to smallpox vaccine in Uzbekistan; state of immunity to smallpox vaccine following the Great Patriotic War. Trudy Tash. NIIVS 5:37-46'62. (MIRA 16:10)
(UZBEKISTAN — SMALLPOX) (IMMUNITY) (VACCINATION)



PROCESSES AND PROPERTIES INDEX

11E

Potassium, sodium and calcium contents in the sperm and secretions of the sexual glands of the boar. T. N. Nemeyanova. *Viestnyk. Inst. Zhivotn.* (U. S. S. R.), Uspekhi Zootekh. Nauk 2, No. 2, 252-66 (in English 265-6)(1936); *Exp. Sta. Record* 77, No. 3, 325(1937). — The spermatozoa prior to leaving the epididymis are in surroundings poor in electrolytes, but during ejaculation the surroundings are rich in electrolytes, particularly Na. M. W. M.